Title: Stakeholder consensus on important school-based strategies for increasing girls' physical activity

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Stakeholder consensus on important school-based strategies for increasing girls' physical activity

Abstract

Background: Girls are less physically active than boys, and school-based physical activity interventions in co-educational settings are often less effective for girls. To help improve the design of these interventions, this study explored which school-based strategies stakeholders consider most important for increasing girls' physical activity.

Methods: A Delphi study was conducted using three rounds of online surveys with stakeholders from three groups: academics, school educators, and government representatives. In the first round, participants identified strategies they believed could increase girls' physical activity in schools, and responses were analyzed using thematic analysis to generate a list of strategies. In the second and third rounds, participants rated the importance of these strategies using an eight-point Likert scale, and consensus was defined as responses falling within a consecutive three-point range.

Results: Stakeholders across the three groups reached consensus on 19 strategies that emphasized creating inclusive, enjoyable, and empowering environments for girls, including approaches such as supportive school cultures, positive role modelling, safe and welcoming spaces, and opportunities for student voice. Additional areas of agreement differed slightly across groups, with academics and government representatives highlighting system-level and curriculum-related approaches, and school educators and government representatives emphasizing relational practices and operational supports such as staff well-being and resourcing.

Conclusions: Overall, the findings highlight the importance of coordinated, multi-level strategies that combine inclusive teaching practices with broader school and policy support to enhance girls' participation in physical activity, offering guidance for researchers, educators, and policymakers seeking to design and sustain more effective school-based interventions.

Introduction

Physical inactivity is a global problem. Despite the multiple health benefits associated with physical activity,[1] most children and adolescents worldwide do not meet the minimum recommended levels of physical activity needed to achieve optimal health. This is particularly problematic amongst adolescent girls since they are less physically active compared with boys.[2]

As per the socio-ecological framework, girls' participation in physical activity is influenced by multiple interacting factors operating across individual, social, environmental, and policy levels.[3] Compared with boys, girls often report lower perceived competence, lower enjoyment and motivation for physical activity, fewer opportunities for participation, and greater social and cultural barriers, including gender norms and concerns about judgement during participation.[4] These influences may contribute not only to lower physical activity levels among girls but also to gender differences in intervention effectiveness, as interventions that do not adequately address girls' specific needs, preferences, and contextual barriers may be less successful in engaging and retaining participants.[4] Further, there is limited evidence on which specific strategies embedded within these interventions make them effective and whether that varies by gender. In their review, Neil-Sztramko and colleagues[5] performed a subgroup analysis by intervention type to determine the impact of different school-based physical activity interventions on the physical activity of children and adolescents. However, they did not examine the specific strategies included in each intervention type (multi-component interventions, school-time physical activity, enhanced physical education, before and after school programs) and they did not perform any subgroup analysis by gender. Consequently, there are no clear recommendations for effective strategies to support girls' physical activity in schools.

Moreover, decisions regarding the effective strategies of school-based physical activity interventions based solely upon the existing evidence are problematic as it may lead to disagreements among researchers regarding which strategies should be considered as effective. This is due to the studies using different methods, measures of physical activity, and poor quality of primary studies and/or reviews.[6] Therefore, it is important to take the perspectives of stakeholders as stakeholder perspectives may provide contextual, experiential, and implementation-focused insights that are not readily captured through effectiveness studies alone. Academics contribute evidence-informed perspectives, educators provide practical knowledge regarding implementation and student engagement, and government representatives offer insights into policy development, scalability, and resource allocation. Examining convergence and divergence across these perspectives may provide implementation-relevant knowledge beyond that available from empirical effectiveness studies alone relevant to school-based physical activity promotion.[7]

Applied to school-based physical activity interventions, the aim of the present Delphi study was to identify stakeholder-prioritized strategies for increasing girls' physical activity in primary and secondary schools , in line with the five components of the Comprehensive School Physical Activity Program framework,[8] and to examine areas of agreement and divergence across stakeholder groups that may inform intervention design, implementation, and policy development. The CSPAP framework was selected because it takes within, before, and after school factors into consideration and thus provides a comprehensive perspective of the factors which are associated with improving health behaviors.[8] Strategies are referred to as the intervention techniques, mechanisms, or processes which may have an effect on the outcome variables and may explain how an intervention works.[9,10] Specifically, the research question was:

Which strategies – related to physical education, physical activity during school, physical activity before and/or after school, staff involvement, and family and community engagement – do stakeholders think are important to increase girls' physical activity in primary and secondary schools?

Methods

We applied three rounds of the Delphi method, which is considered sufficient to reach a point where results do not change substantially with further rounds.[11] We piloted the Delphi surveys with the research team before distributing them to the entire stakeholders' panel. This study followed the guidance on Conducting and REporting DElphi Studies (CREDES).[12] We pre-registered the study with the Open Science Framework available at https://osf.io/ksb75/overview?view_only=f3bb7604479243f8891d7b7baf51dfb5.

Participants

As the findings of a Delphi study are determined by the opinions of participants, it is important to have participants who are primary stakeholders in the context of the target topic and have relevant knowledge and experience. A stakeholder is a person who: 1) has background and contextual experience of the given topic; 2) can contribute to the discussion based upon relevant personal and/or professional experiences; and 3) would be likely to apply the findings of the study within their professions.[13,14]

In the context of the current study, we considered participants from three categories – academics, school educators, and government representatives. Following Baker and colleagues,[15] we drafted criteria that operationalized expertise in an objective and consistent manner. We defined stakeholders as those meeting the following criteria:

1. Academics:

   a. Had a PhD in physical education (PE), sport and exercise science, sport and exercise psychology, or public health with expertise in children' s and adolescents' physical activity; **and**
   b. Had published at least three articles in the area of physical activity in children and adolescents in peer-reviewed journals indexed in PubMed or Scopus in the last seven years.

Although not all academic participants specialized exclusively in school-based interventions, all met predefined criteria demonstrating expertise in child and adolescent physical activity research.

2. School educators:
   a. School principals with at least five years of experience leading a school and with knowledge of designing and/or implementing school policies regarding physical activity; **or**
   b. Specialist PE teachers with at least five years' experience of teaching PE; **or**
   c. Generalist teachers (e.g., primary school teachers) with at least five years' experience of teaching PE.

Specialist PE teachers referred to teachers whose primary teaching responsibilities focused on physical education and who had specialist training or qualifications in physical education. Generalist teachers referred primarily to primary school teachers responsible for delivering multiple curriculum areas including physical education.[16]

3. Government representatives:
   a. Individuals working in a government department, with a focus on health, education, sports, and/or recreation in children and adolescents; **and**

b. Individuals with at least five years' experience in the area of physical activity of children and adolescents to demonstrate reasonable background knowledge and understanding.

To recruit participants, we identified a range of potential national and international stakeholders with expertise in the area of physical activity via, using snowballing techniques, through professional contacts and social media (see Supplementary File 1; available online). Participants who met criteria for more than one stakeholder group were assigned to the category that most closely reflected their primary professional role at the time of recruitment. We sent an invitation email to potential stakeholders with the details of the Delphi study and a link to the first survey. Although participation was sought internationally, most respondents were from Australia. In line with the authorship criteria described in the International Committee of Medical Journal Editors (ICMJE),[17] academic stakeholders were given an opportunity to be a co-author on the paper resulting from the study by participating in all three surveys and providing feedback on the publication manuscript. Academic stakeholders were invited to contribute to manuscript development as a pragmatic approach to managing manuscript preparation within a large Delphi panel. This decision reflected practical considerations related to the size and composition of the panel rather than on differing authorship standards across stakeholder groups.

Consensus

The research question determines the method to achieve consensus in a Delphi study.[18] In the second and third rounds of the current study, we used an eight-point Likert scale (1= *strongly disagree* to 8 = *strongly agree*) and asked the stakeholders to determine the extent to which they believed each strategy was important to increase the physical activity of girls. Consensus was achieved if the Delphi stakeholders from one participant category chose answers within a consecutive three-point range. This approach allows identification of agreement while

accommodating some variation in stakeholder opinion. This criterion was specified a priori to represent a relatively narrow distribution of ratings while recognizing that some variation in opinion is expected within multidisciplinary stakeholder groups. Given the absence of a universally accepted definition of consensus in Delphi studies,[19,20] consensus thresholds should be selected and justified according to the study context and reported transparently. Each strategy's importance was inferred by examining their median scores and the following cut-offs were used to judge the level of importance: not important (median = 1-<2), somewhat important (median = 2-<4), important (median = 4-<6), very important (median = 6-8).

Ethics

The appropriate Human Research Ethics Committee granted ethical approval for this study on the protection of human participants.

Procedures

We collected the survey data using Qualtrics (Qualtrics, Provo, UT). Eligible stakeholders provided written informed consent prior to survey completion.

Delphi survey 1

In the first survey, we asked the stakeholders to use text boxes to write any promising strategies for increasing the physical activity of school girls in primary and secondary schools according to the five components of the CSPAP framework.

Open-ended responses were exported from Qualtrics into Microsoft Excel. Responses were coded independently by the lead researcher and subsequently reviewed by the research team. Similar responses were grouped into strategies and organized within CSPAP components through iterative discussion and consensus following principles of thematic analysis.[21]

Delphi survey 2

In the second survey, we asked the stakeholders to rate how important they thought each strategy was, identified through survey 1, in increasing the physical activity of girls by asking the following question for each CSPAP component and corresponding strategies: "*What strategies, related to physical education, do you think are important to increase girls' physical activity in primary and secondary schools? Please rate the importance of each strategy, identified in the first survey, on a Likert rating scale of 8 (1= strongly disagree, 8 = strongly agree)*." Stakeholders were given the opportunity to comment on any additional strategies they believed were important for increasing the physical activity of girls but were not already on the list.

Delphi survey 3

In the third survey of the Delphi study, we asked the stakeholders to rate the strategies which had not achieved consensus in the second round as well as rate any new strategies mentioned by stakeholders in the second round that were considerably different from the original list of strategies. Strategies which had already achieved consensus in the second survey were not included in the third survey. The same eight-point Likert scale from the second survey was used for the third survey.

Results

Delphi survey 1

In total, 266 invitations were sent to potential Delphi stakeholders from the three participant categories, out of which 85 gave responses to the initial screening questions. Of these, 16 did not meet the eligibility criteria to participate in the survey, and 69 completed the first Delphi survey (see Supplementary Figure 1; available online). Thirty-six stakeholders were from the academics' category, 25 were from the school educators' category, and 8 were from the government representatives' category. Stakeholders were from Australia (n = 51), United

Kingdom (n = 9), Ireland (n = 4), and Belgium, Canada, Germany, Singapore, and Spain (n = 1 from each country). Forty-one stakeholders were female and 28 were male.

In their open text responses, stakeholders suggested 84 strategies with 21 falling under the physical education (PE) component of the CSPAP framework, 17 strategies in physical activity during school, 13 strategies in physical activity before and/or after school, 16 strategies in staff involvement, and 17 strategies in family and community engagement component (see Table 1 & Supplementary Table 1; available online).

Some identified items may be conceptually related or represent proximal mechanisms through which physical activity interventions exert their effects. For example, increasing girls' competence may be viewed as both a target outcome and a mechanism through which inclusive teaching practices influence participation. Consistent with Delphi methodology,[19] strategies were retained if stakeholders identified them as important, even where conceptual overlap existed.

Delphi survey 2

Fifty-eight stakeholders completed the second Delphi survey. No new strategies were identified by the stakeholders that were considerably different from the strategies identified in Survey 1. However, the stakeholders sought clarity for the wording of three strategies as shown in the second survey (avoid using non-gendered language, encourage physical activity with a purpose, focus on the whole school physical activity approach) for which explanations/examples were added to be shown in the third survey. Academics reached consensus on 31 strategies, school educators on 30 strategies, and government representatives on 45 strategies, which were all rated as very important (median = 6-8).

Delphi survey 3

Forty-nine stakeholders completed the third Delphi survey with 31 stakeholders from the academics' category, 13 from the school educators' category, and 5 from the government

representatives' category. Academics did not reach consensus on any of the remaining strategies. However, school educators reached consensus on another 9 strategies and government representatives on 18 strategies, which were all rated as very important (median = 6-8).

Consensus on strategies as per the CSPAP framework

The breakdown of strategies which reached consensus as per the CSPAP framework for any participant category is described in Supplementary Table 1 (available online). In total, 19 strategies reached consensus across all participant categories for all five components of the CSPAP framework. All consensus strategies were rated as very important (median = 6-8).For each component of the CSPAP framework, consensus across all participant categories, across any two stakeholder groups, and unique consensus is further detailed in Table 1 and Figure 1 (PE component), Figure 2 (physical activity during school), Figure 3 (physical activity before and/or after school), Figure 4 (staff involvement), and Figure 5 (family and community engagement).

Some identified strategies, such as training principals on why their schools should do more physical activity and training senior staff to promote a school culture that values physical activity, may be conceptually related and could reasonably be grouped into broader implementation themes. However, because participants rated each strategy as a distinct survey item during the Delphi process, the items were retained and reported as originally presented to preserve the integrity of the consensus process. Consequently, conceptually related strategies should be interpreted as complementary components of broader implementation approaches rather than as entirely independent recommendations.Overall, the strategies reaching consensus across all participant categories clustered around four broad themes: (1) creating inclusive and gender-responsive environments (e.g., non-gendered language, active uniforms, safe spaces, challenging gender stereotypes); (2) promoting

enjoyment, choice, and student voice (e.g., focus on fun, girls' involvement in activity design, offering lifelong physical activities); (3) providing supportive social and physical environments (e.g., female role models, leadership opportunities, access to facilities and equipment); and (4) strengthening school and community support for physical activity (e.g., professional development, school-community partnerships).

Although substantial agreement was observed across stakeholder groups, some differences emerged. Academics and government representatives more frequently reached consensus on structural and policy-oriented strategies, including whole-school approaches, school policies, leadership training, and curriculum-related initiatives. In contrast, school educators more frequently prioritized relational and implementation-focused strategies, such as positive messaging, staff culture, and family engagement. Government representatives reached consensus on the largest number of strategies overall, particularly those requiring system-level planning, resourcing, or policy support, such as specialist physical education teachers, girls-only opportunities, incentives, and family-support initiatives.

Across CSPAP components, consensus was strongest for strategies related to physical education and physical activity during school, whereas greater divergence was observed for staff involvement and family/community engagement strategies. These findings suggest broad agreement regarding the importance of inclusive, empowering, and enjoyable environments for girls' physical activity, alongside differences in how stakeholder groups prioritize structural, relational, and implementation-related approaches.

Discussion

This Delphi study sought to identify which school-based strategies stakeholders consider most important for increasing girls' physical activity. Unlike previous research, which has primarily focused on identifying determinants and barriers to girls' physical activity, the present study examined how these factors are prioritized for intervention and policy

development. Although many consensus strategies align with existing evidence, stakeholders converged on a relatively small set of strategies centered on inclusion, enjoyment, empowerment, student voice, supportive relationships, and safe environments despite beginning with 84 individual strategies. This provides new insight into which strategies stakeholders perceive as most important for addressing girls' physical activity within school settings. All stakeholders strongly supported strategies which point to the need to make physical activity environments more inclusive, enjoyable, and centered on the preferences of girls through non-gendered language, active uniforms, valuing girls' voice in designing physical activity, visible female role models, safe and girls-only spaces where needed, and a shift towards fun, social, and lifelong activities instead of traditional and competitive sport. Recent research suggests that gender stereotypes in physical education can either be perpetuated or challenged through teachers' attitudes and language, thus shaping girls' willingness to participate in physical activity.[22] Similarly, evidence on school uniforms shows that use of formal uniforms (e.g., skirts, leather shoes) restrict the physical activity of students, especially girls, whereas active uniforms are associated with higher physical activity in schools.[23,24] Involvement of girls in designing and implementing interventions can also increase acceptability of and participation in physical activity.[25] Similarly, having visible active female role models in interventions, such as teachers, senior students, or community women, has been found to be feasible with a positive impact in motivating girls to be physically active. These role models can provide girls with relatable examples that being active is achievable and normative for girls as well.[26] Moreover, in the Girls in Sport initiative in Australia,[27] researchers reported that adolescent girls often feel conscious or intimidated in co-ed settings, especially due to the dominating behavior of boys. Girls voiced that a more respectful behavior from boys and provision of safe and girls-only spaces (e.g., specific areas of the playground allocated to girls) can help to address their concerns. Girls

are also more likely to be physically active when it is associated with enjoyment and social belonging[28] and the focus is not on overly competitive sport.[29] In summary, the strategies with consensus across all stakeholder categories focus on fostering an inclusive and empowering environment for girls, which is well grounded in literature, suggesting their importance in any intervention that aims to increase girls' participation in physical activity. Importantly, the findings do not suggest that these strategies are uniquely effective for girls; rather, stakeholders consistently prioritized them as particularly important for addressing barriers disproportionately experienced by girls.

At the same time, systematic patterns of disagreement between stakeholders are indicative of tensions between evidence, policy, and day-to-day feasibility. While substantial agreement existed regarding the importance of inclusive and empowering environments, differences emerged regarding how such environments should be achieved. Academics and government representatives had an alignment on structural and curricular strategies such as whole-school physical activity policies, active recess, classroom energizers, autonomy-supportive teaching, and training for school leaders. These strategies are supported by systematic reviews on the effectiveness of whole-school approaches – that integrate curricular activities within the broad school and community context – in yielding better outcomes for youth physical activity.[30,31] However, the lack of consensus on these strategies by school educators may be indicative of on-the-ground challenges, such as workload, timetable and resources constraints. Government representatives uniquely had a consensus on strategies including having specialist PE teachers, girls-only activities, incentives, and intramural vs intermural teams. Although this aligns with evidence, for example, specialist PE teachers can increase in-lesson activity,[32] these strategies may not have reached universal consensus due to being considered resource-intensive and difficult to scale. In contrast, school educators uniquely supported strategies emphasizing positive messaging and incorporating physical activity in

staff culture, reflecting the impact of encouragement and role modelling that educators witness in their daily work, even if these are difficult to quantify in research or mandate in policy.

These relational strategies are also aligned with theories of social connectedness and motivational climates to increase student engagement through positive teacher-student interactions.[33]These differences may reflect the distinct forms of knowledge brought to the Delphi process, with academics drawing primarily on empirical evidence, educators on practical implementation experience, and government representatives on feasibility, scalability, and policy considerations.[7] Rather than representing competing perspectives, these findings suggest that effective promotion of girls' physical activity may require integration of scientific, experiential, and policy knowledge.

Taken together, the findings can be interpreted through a socioecological lens, with stakeholder consensus spanning multiple levels of influence on physical activity behavior. At the individual level, strategies such as developing girls' competence, confidence, and enjoyment may enhance motivation and engagement. At the interpersonal level, emphasis on supportive teachers, positive role models, student voice, and peer relationships highlights the importance of social influences. Organisational factors are reflected in strategies related to school culture, professional development, and policy support, while community partnerships and family engagement represent broader environmental influences. This pattern suggests that stakeholders perceive girls' physical activity as a product of interacting influences across multiple ecological levels rather than a consequence of individual choice alone.[3]

Several consensus strategies also align with Self-Determination Theory, which proposes that autonomy, competence, and relatedness are essential psychological needs that support sustained motivation for physical activity.[34] For example, providing girls with opportunities to contribute to the design of physical activity experiences reflects autonomy support;

increasing competence through skill development addresses perceived competence; and creating enjoyable, socially supportive environments promotes relatedness. Together, these findings suggest that stakeholders prioritised strategies that address core motivational processes associated with girls' participation in physical activity. Similarly, support for positive messaging, inclusive environments, and active female role models aligns with research demonstrating the benefits of mastery-oriented motivational climates that emphasise enjoyment, effort, learning, and personal improvement rather than social comparison or performance outcomes.[35] Given the pattern of consensus and divergence across stakeholders, future research can unpack these divergences by comparing how different school contexts and leadership types perceive the feasibility and impact of, for example, structural versus relational strategies to determine "what works, for whom, and in what context."[36]

Importantly, the identified strategies should not be interpreted as universally applicable across all school settings. Although consensus was achieved regarding broad principles for promoting girls' physical activity, their implementation is likely to depend upon contextual factors such as school resources, leadership support, cultural norms, policy environments, and community characteristics. Consistent with implementation science and systems-thinking perspectives, interventions are not fixed entities but interact dynamically with the contexts in which they are delivered.[37] Consequently, stakeholders may need to adapt these consensus-based strategies (e.g., girls-only opportunities versus co-educational approaches) to suit local circumstances while maintaining their underlying intent. Such approaches can help identify leverage points for change, implementation bottlenecks (e.g., teacher capacity and competing priorities), and unintended consequences that may not be apparent when examining intervention strategies in isolation.[38]

It is also important to recognize that girls are not a homogeneous group and that experiences of physical activity are shaped by the intersection of gender with other social identities and

structural conditions, including socioeconomic circumstances, ethnicity, disability, migration background, and gender diversity. These intersecting factors may influence the barriers girls experience, as well as the acceptability, feasibility, and effectiveness of strategies to promote physical activity across different educational and community contexts. Consequently, implementation efforts should be tailored to local contexts and consider the diverse needs and lived experiences of different groups of girls to support equitable participation in physical activity. [39]

This study has some limitations. First, although stakeholders were asked to identify strategies separately for primary and secondary school girls during the initial Delphi round, most responses focused on broadly applicable strategies rather than age-specific recommendations. Consequently, there was insufficient age-specific information to generate separate lists of strategies for subsequent Delphi rounds. Developmental differences across childhood and adolescence may influence the relevance of specific strategies – particularly regarding autonomy, peer relationships, and family influence[40] – thus, the resulting consensus may not apply equally across all age groups. Second, although this study focuses specifically on girls due to their consistently lower levels of physical activity compared with boys,[2] we recognize that gender exists beyond a binary framework. Emerging research suggests that transgender, non-binary, and gender-diverse young people may also experience disproportionately low participation in physical activity and sport, often due to experiences of exclusion, discrimination, gender normativity, and concerns regarding safety and belonging within physical activity settings.[41] Thus, although several strategies that achieved consensus – including providing safe spaces, challenging gender stereotypes, promoting inclusive language, and incorporating student voice – align with broader principles of inclusion and may have relevance beyond girls alone. Since the present study focused specifically on girls, the extent to which these strategies address the needs of gender-diverse youth remains

unknown and requires further investigation. Third, participants were predominantly from Australia and academics were overrepresented relative to government representatives, potentially limiting transferability to other educational and policy contexts, as Delphi findings may be influenced by the composition and geographical distribution of panel members.[14] Fourth, participant attrition occurred across Delphi rounds and may have influenced consensus outcomes, as participant dropout can alter panel composition and affect the stability of Delphi results.[42] Fifth, academic participants were offered the opportunity for authorship if they fulfilled ICMJE[17] criteria, which may have influenced participation decisions, although authorship incentives have previously been used to support engagement in stakeholder consensus processes.[19] Sixth, country-level differences were not examined despite the international sample due to limited sample sizes within individual countries. Finally, some conceptually related strategies, such as *increasing girls' competence and confidence* and *focusing on the socialization aspect of physical activity*, may have been combined into broader implementation themes during the survey development stage. Although all items were retained as originally generated and rated to preserve the integrity of the Delphi consensus process, greater consolidation of conceptually similar items prior to participant rating may have reduced overlap and improved the clarity and interpretability of the findings. Future Delphi studies should consider refining and consolidating related items during the item development stage before stakeholder rating.

Conclusions

This Delphi study identified stakeholder-informed strategies to increase girls' physical activity, highlighting consensus on the importance of inclusivity, enjoyment, safety, and student voice, while underscoring the need for context-sensitive, multi-level implementation approaches.

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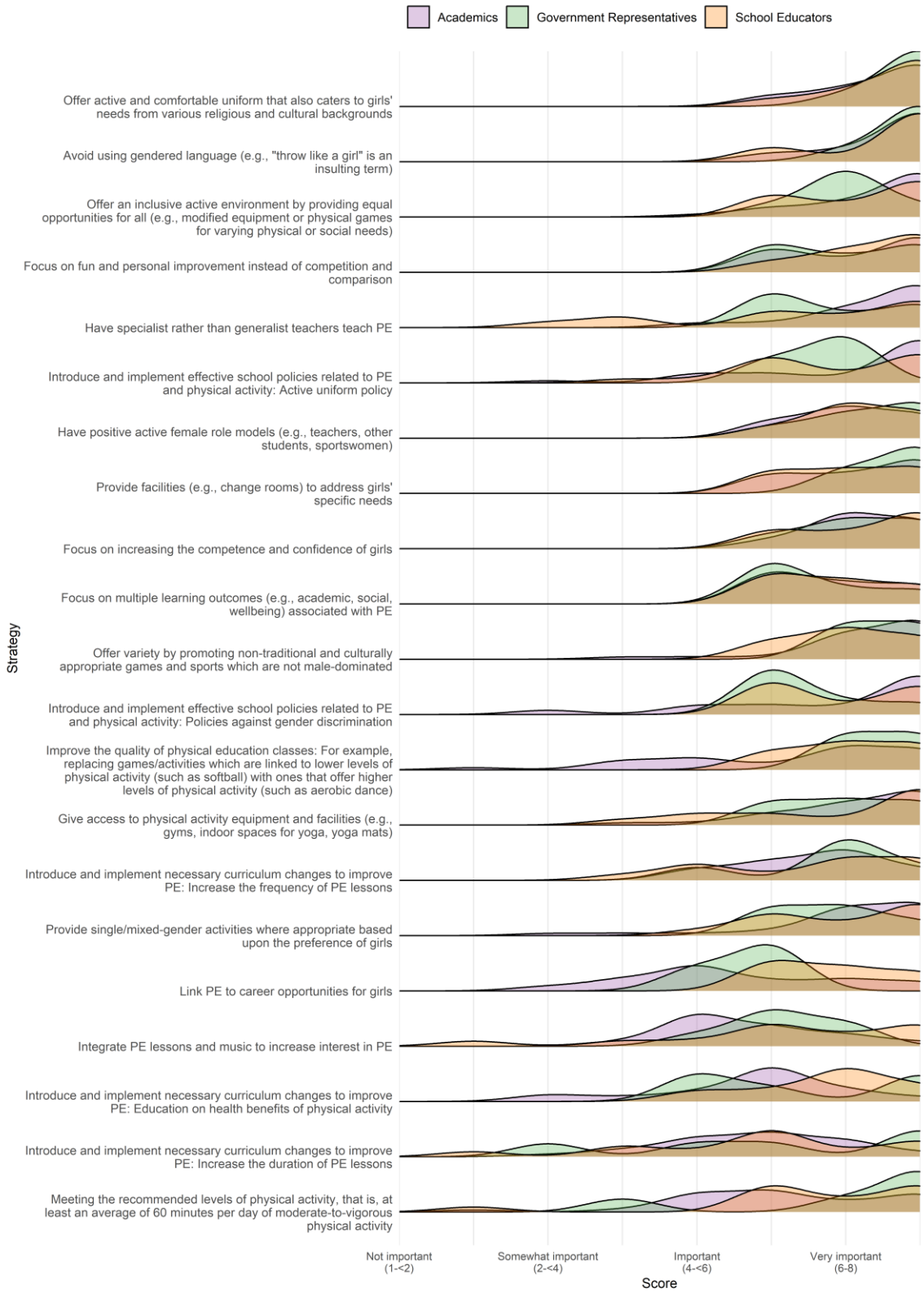


Figure 1. Importance of strategies by expertise for CSPAP component – physical education

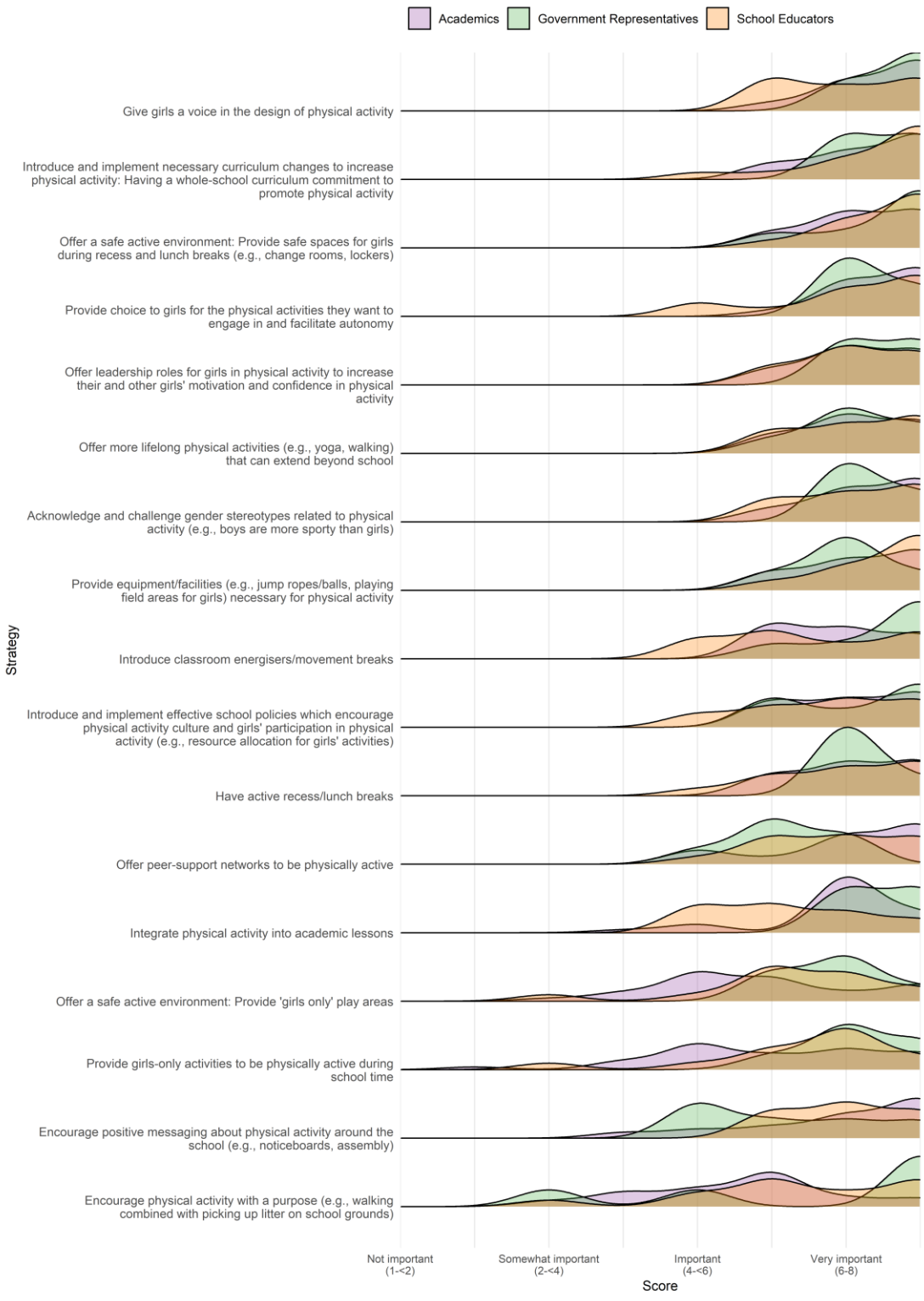


Figure 2. Importance of strategies by expertise for CSPAP component – physical activity during school

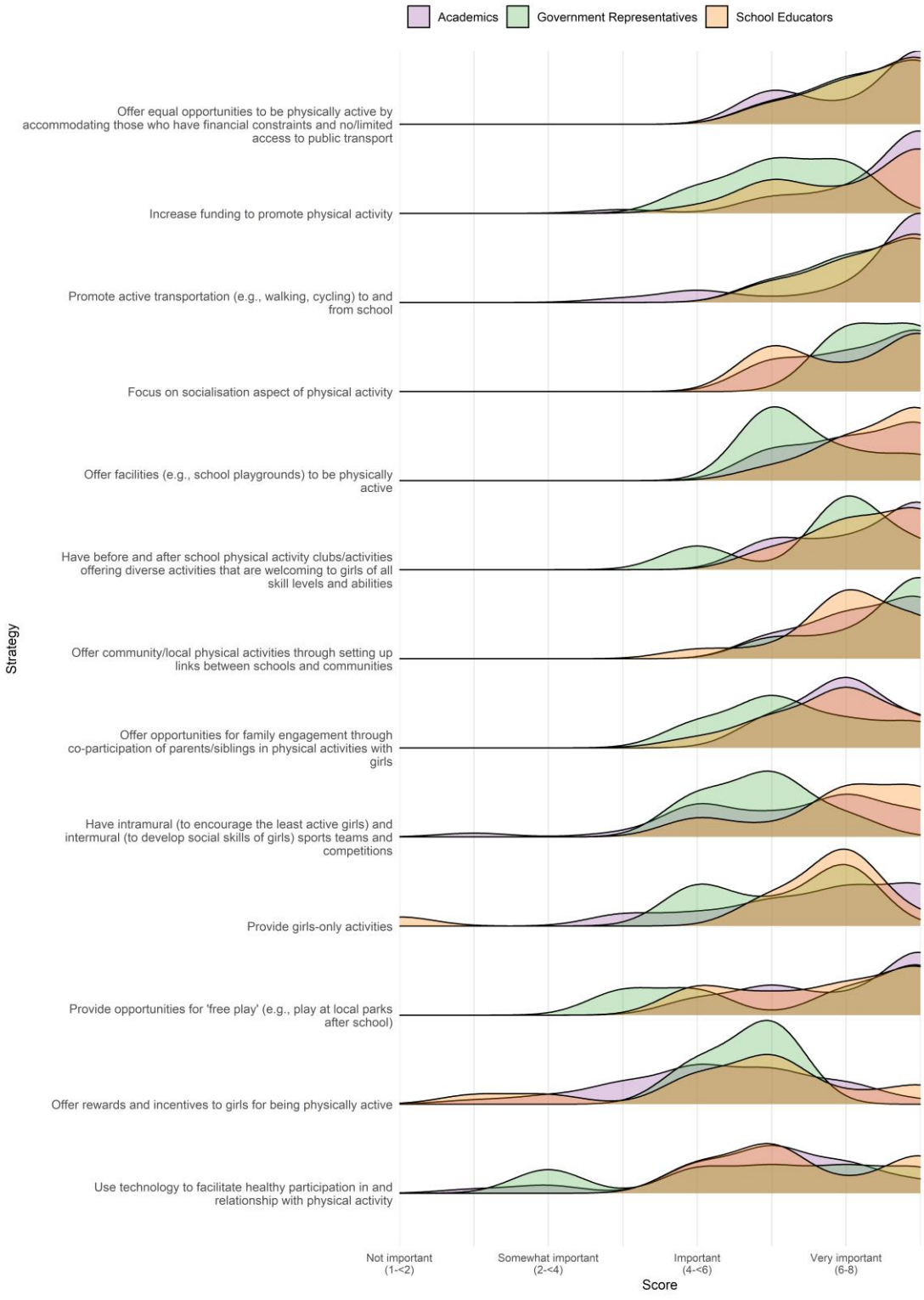


Figure 3. Importance of strategies by expertise for CSPAP component – physical activity before/after school

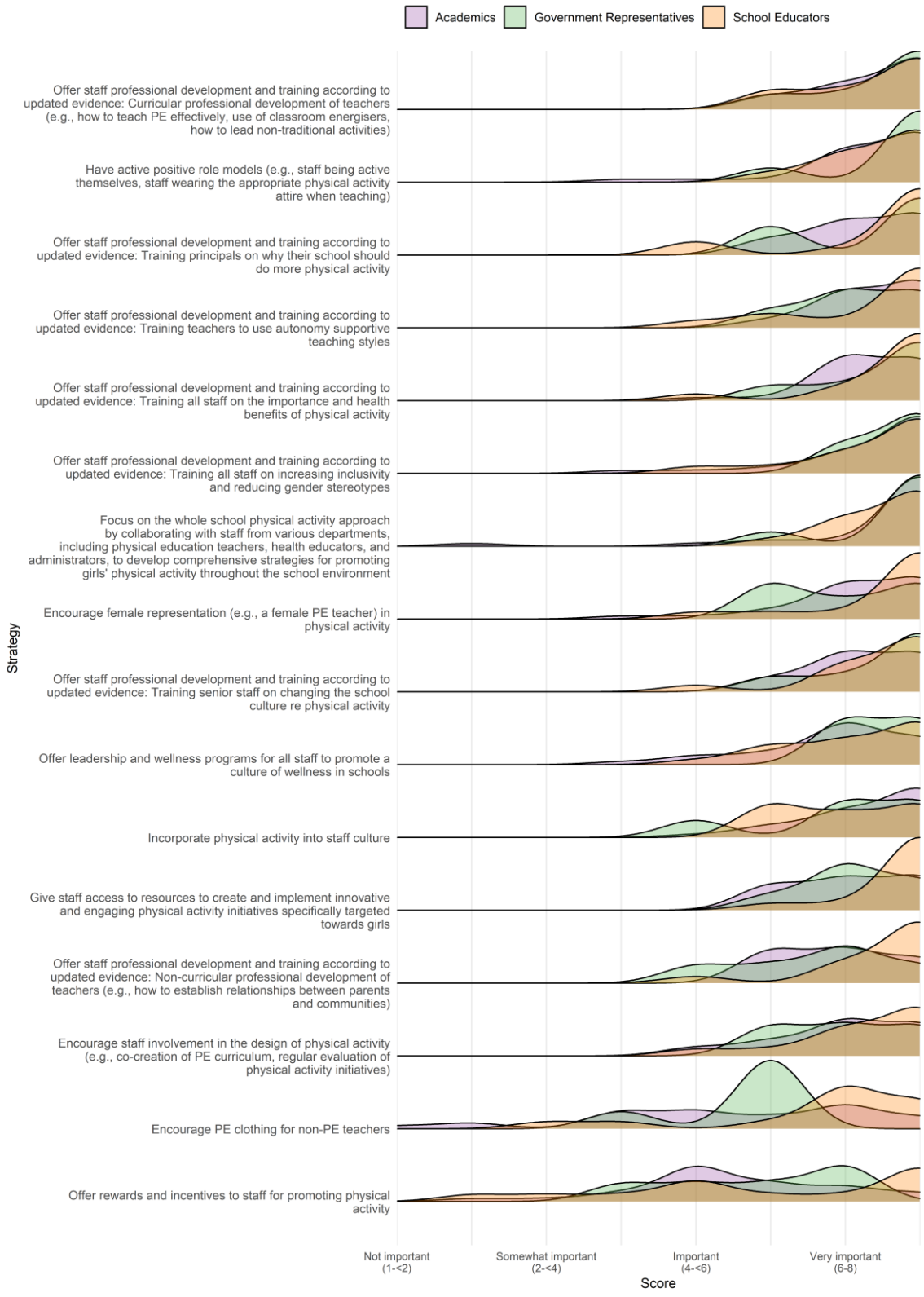


Figure 4. Importance of strategies by expertise for CSPAP component – staff involvement

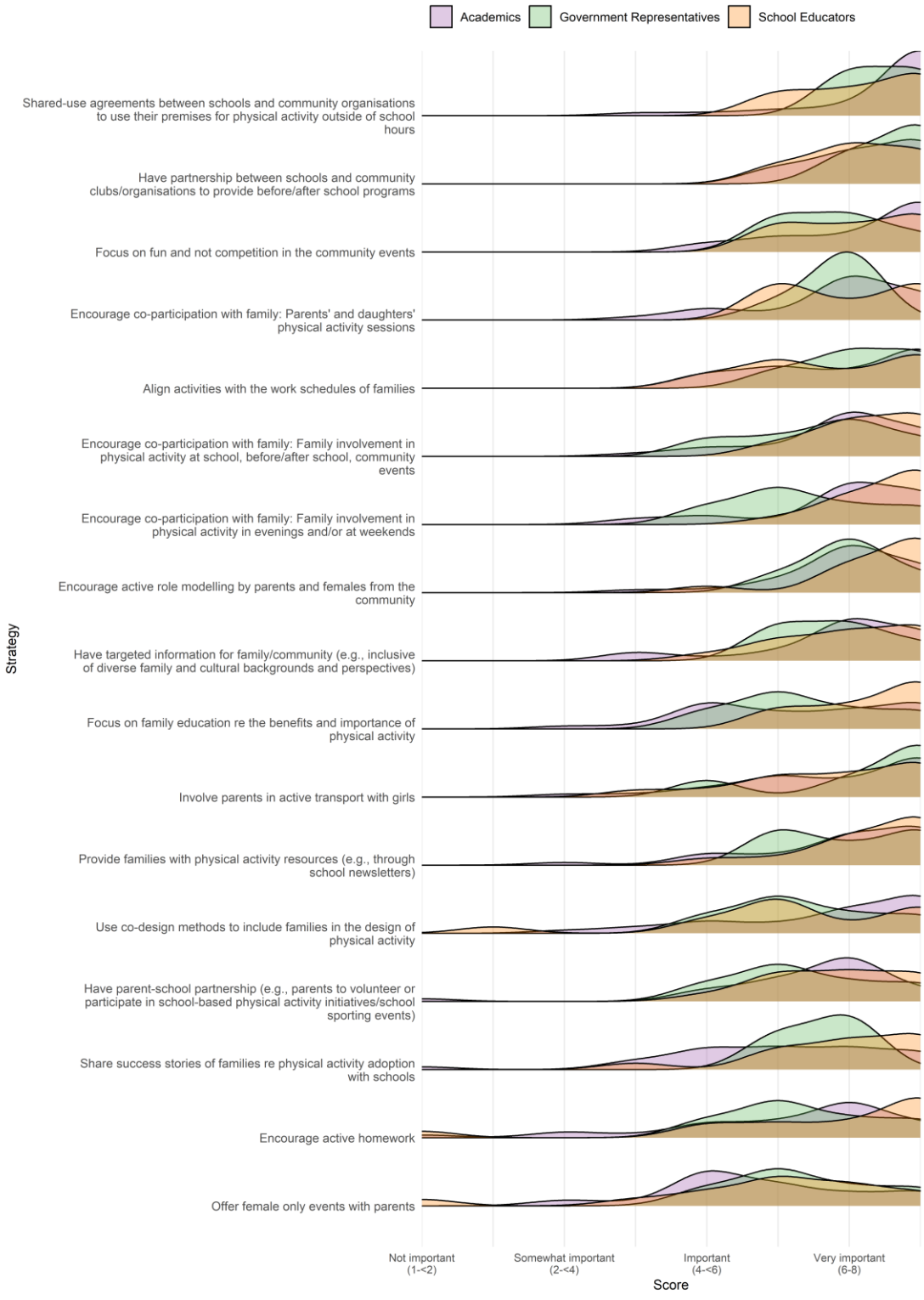


Figure 5. Importance of strategies by expertise for CSPAP component – family and community engagement

Table 1: Stakeholders' consensus on school-based strategies for increasing girls' physical activity as per CSPAP Framework

CSPAP component	Identified strategies		
	Consensus across all groups	**Consensus in two groups**	**Unique consensus**
Physical education	Active uniform, use of non-gendered language, focus on fun, active female role models, provision of girls' specific facilities, focus on increasing girls' competence, focus on multiple learning outcomes	**School educators and government representatives:** equal opportunities for all to be physically active, active uniform policy, non-traditional and culturally appropriate games, policies against gender discrimination, improving the quality of PE classes, linking PE to career opportunities	**Government representatives:** specialist PE teachers, access to physical activity equipment, single/mixed-gender activities as per the preference of girls, integrating PE lessons and music
Physical activity during school	Girls' voice in the design of physical activity, providing safe spaces for girls, leadership roles for girls, offering lifelong physical activities, challenging gender stereotypes related to physical activity, providing equipment for physical activity	**Academics and government representatives:** whole-school curriculum commitment to promote physical activity, giving choice to girls, classroom energizers, implementing school policies to promote physical activity culture, active recess	**Government representatives:** peer support for physical activity, integrating physical activity into academic lessons, 'girls only' play areas, providing girls-only activities **School educators:** positive messaging about physical activity
Physical activity before and/or after school	Equal opportunities for all, focus on socialization, offering facilities to be physically active	**School educators and government representatives:** funding for physical activity, active transportation **Academics and government representatives:** links between schools and communities **Academics and school educators:** before and after school physical activity clubs	**Government representatives:** intramural and intermural sports teams and competitions, girls-only activities, incentives for physical activity **Academics:** family engagement in physical activity
Staff involvement	Curricular professional development of teachers, giving staff access to resources	**School educators and government representatives:** active positive role models, whole school physical activity approach, leadership and wellness programs for staff **Academics and government representatives:** training principals on why their school should do more physical activity, training teachers to use autonomy supportive teaching styles,	**Government representatives:** training all staff on the importance and health benefits of physical activity, training all staff on reducing gender stereotypes, female representation in physical activity, staff involvement in the design of physical activity, PE clothing for non-PE teachers **School educators:** incorporating physical activity into staff culture

		training senior staff on changing the school culture re physical activity	**Academics:** non-curricular professional development of teachers
Family and community engagement	Partnership between schools and community clubs	**School educators and government representatives:** shared-use agreements between schools and community organizations, focus on fun, parents' and daughters' physical activity sessions	**Government representatives:** aligning activities with the work schedules of families, active role modelling by parents, targeted information for family/community, providing families with physical activity resources, sharing success stories of families re physical activity **School educators:** family involvement in physical activity at school/before/after school/community events, family involvement in physical activity in evenings and/or at weekends, family education re the benefits and importance of physical activity